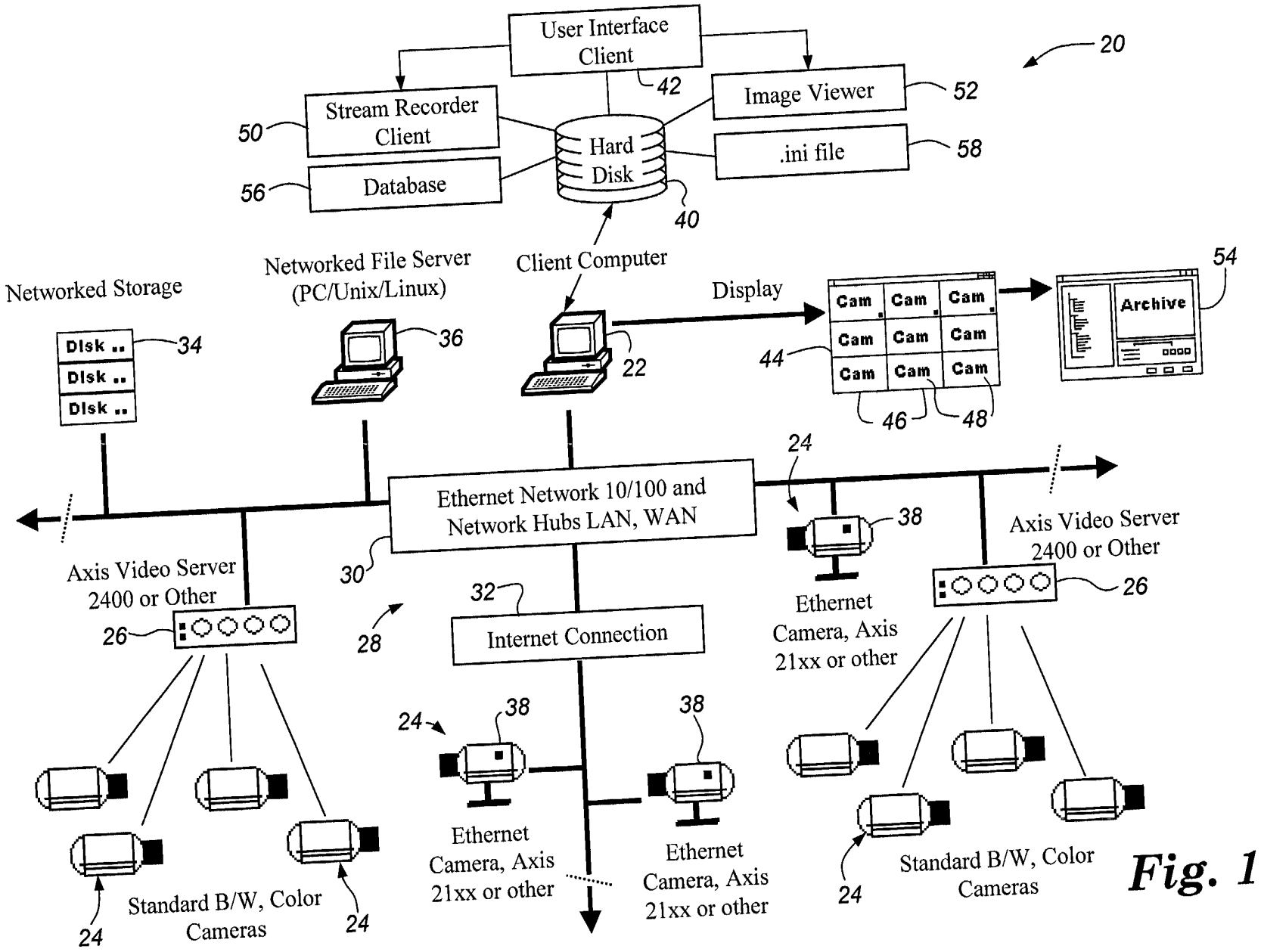
User Interface Client
42
20
Stream Recorder Client
50
Image Viewer
52
Hard Disk
40
.ini file
58
Database
56
Networked Storage
Networked File Server (PC/Unix/Linux)
Client Computer
Display
Disk ..
Disk ..
Disk ..
34
36
22
Cam
Cam
Cam
Cam
Cam
Cam
Cam
Cam
Cam
44
46
48
Archive
54
Ethernet Network 10/100 and Network Hubs LAN, WAN
30
24
38
Axis Video Server 2400 or Other
26
28
32
Internet Connection
Ethernet Camera, Axis 21xx or other
Axis Video Server 2400 or Other
26
24
38
38
Ethernet Camera, Axis 21xx or other
Ethernet Camera, Axis 21xx or other
24
Standard B/W, Color Cameras
24
24
Standard B/W, Color Cameras

Fig. 1

Patent Application

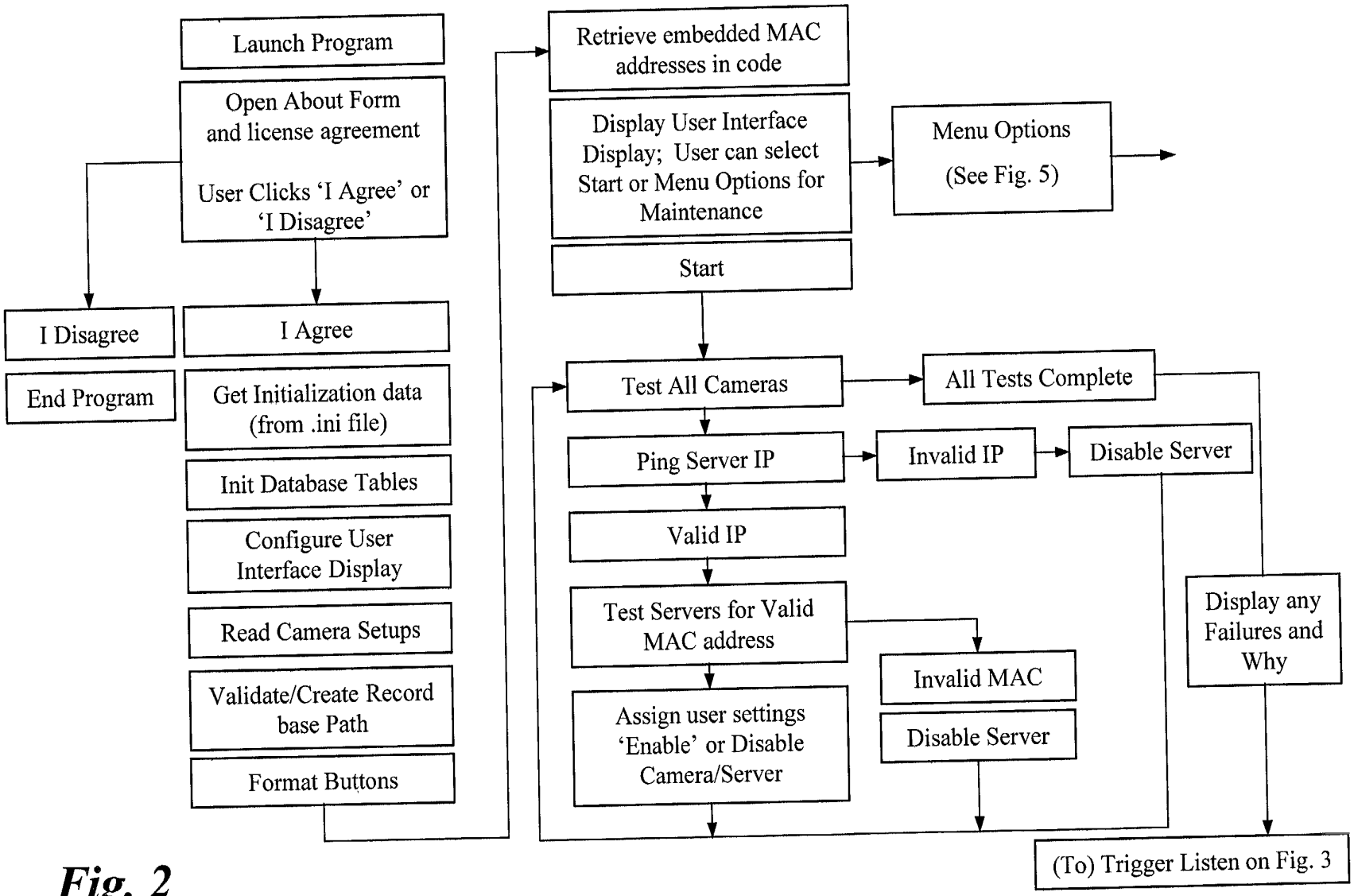

Fig. 2

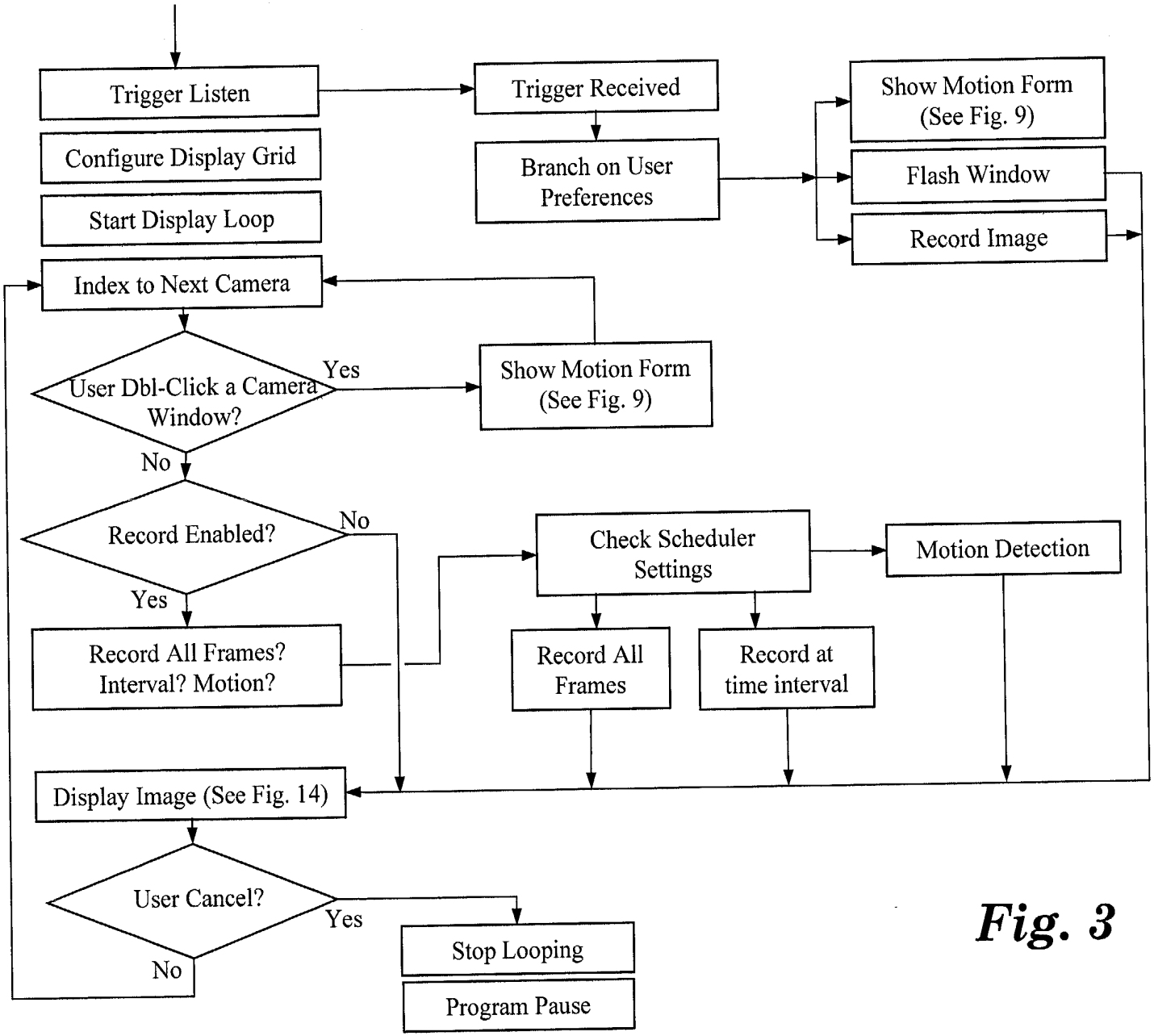
Trigger Listen
Configure Display Grid
Start Display Loop
Trigger Received
Branch on User Preferences
Show Motion Form (See Fig. 9)
Flash Window
Record Image
Index to Next Camera
User Dbl-Click a Camera Window?
Yes
Show Motion Form (See Fig. 9)
No
Record Enabled?
No
Yes
Record All Frames? Interval? Motion?
Check Scheduler Settings
Motion Detection
Record All Frames
Record at time interval
Display Image (See Fig. 14)
User Cancel?
Yes
No
Stop Looping
Program Pause

Fig. 3

Patent Images

[Initialize]

WindowState = NORMAL

Display = Image

DisplayWidth =11505

BorderWidth =2

SkipInactivePorts = True

Images_Across =4

Images_Down =2

Ref_Image_Width =352

Ref_Image_Height =240

ShowHighliteFrames =TRUE

ShowRecordIndicators =TRUE

ShowCameraCaptions =TRUE

ShowPortNumbers =TRUE

PingTimeout = 5000

PingOnImageRequest = FALSE

HighliteFrameColor =16744448

;HighliteFrameColor = &H00&

FlashFrameColor = &H000000FF&

ViewBackColor = &H00808080&

CameraCaptionForeColor = &H00FF00&

CameraCaptionBackColor = &H00&

TCPPort = 1111

HTTPPort = 80

MaxFailOverCount =50

ReconnectAttemptIntervalSecs =60

RecordMode = MULTIPLE,24

RecordThumbNails = TRUE

RecordImagesBasePath = C:\Test

DefaultEmailRecipient =marchesej@teleweb.net

EMailUserID =marchese2

EmailUSerPW =sdsdsdsd

ShowMotionBorder = TRUE

EnableStatusLog = TRUE

EnableErrorLog = TRUE

[Camera Servers]

Camera_Database = C:\Program Files\Softsite32\Database\SoftSite.mdb

[Stream Applet]

StreamViewMode = 2

StreamIntervalSeconds = 0

StreamMaxFPS = 0

StreamRecord = 0

Fig. 4

Patent Application

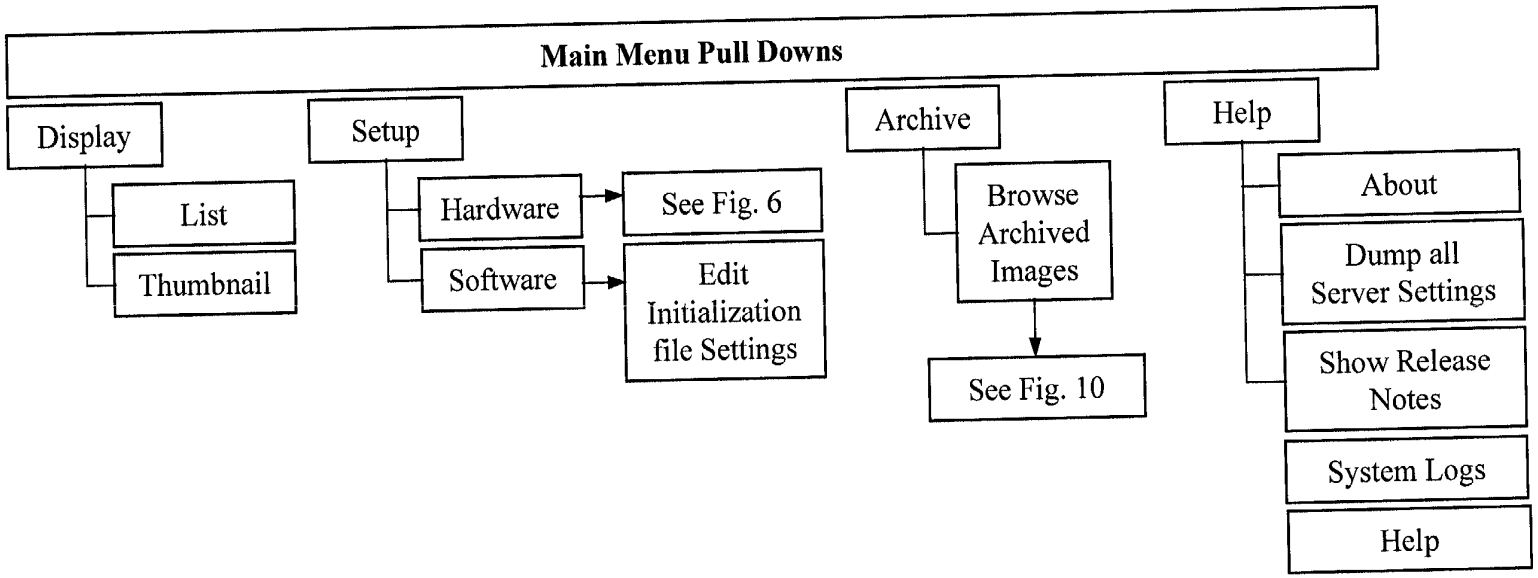

Fig. 5

Patent Application

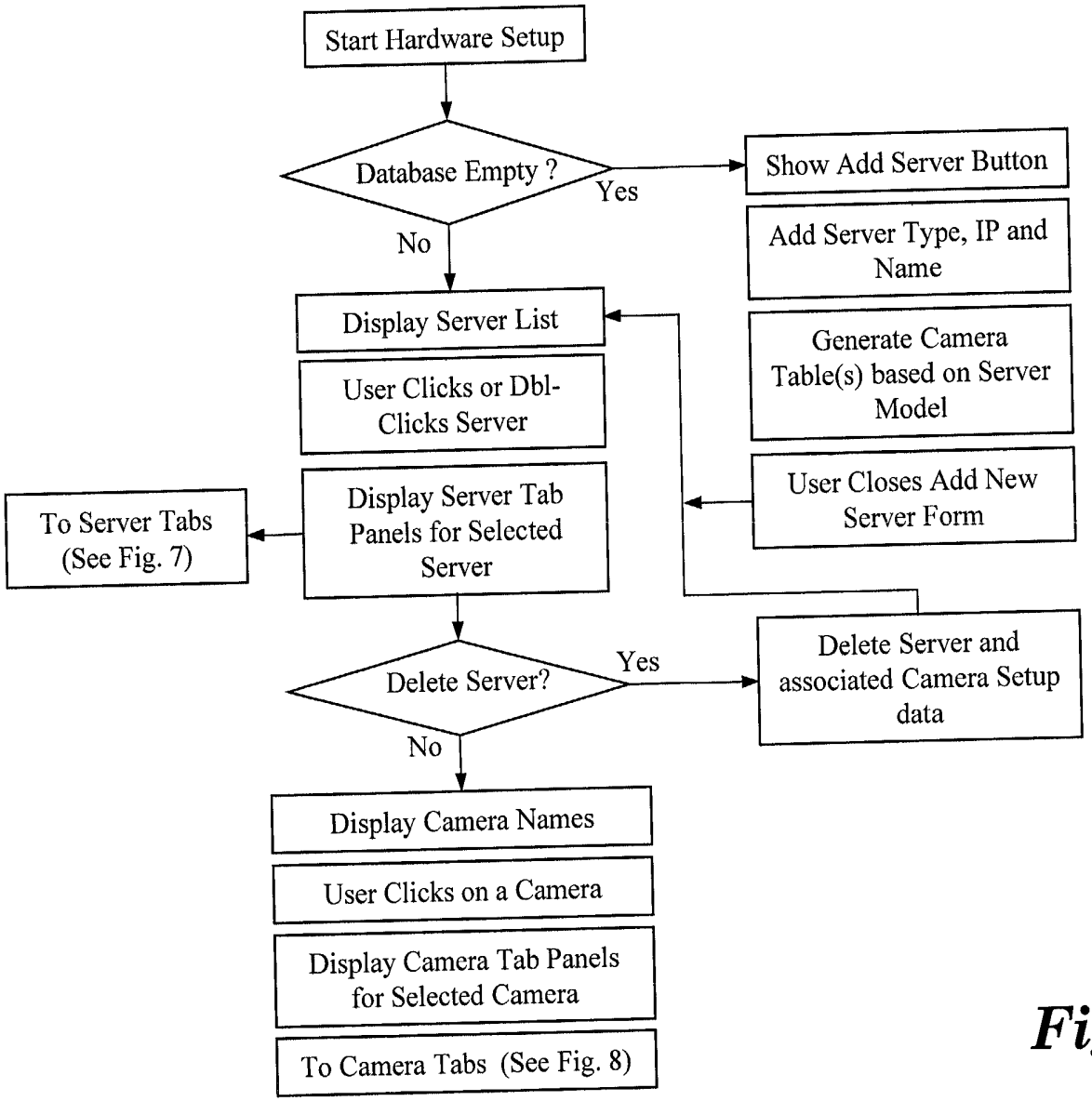

Fig. 6

Patent Application

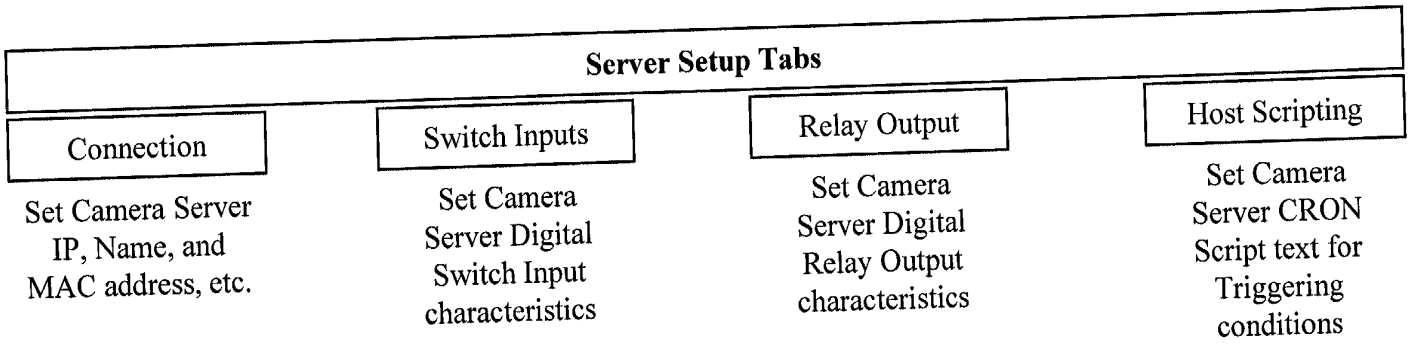

Fig. 7

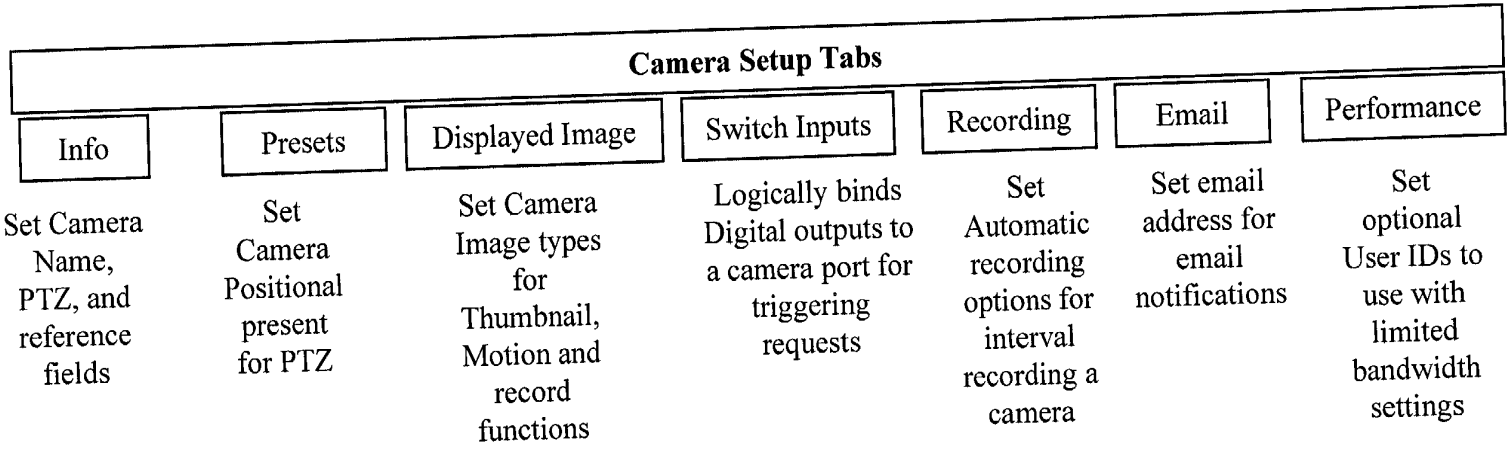

Fig. 8

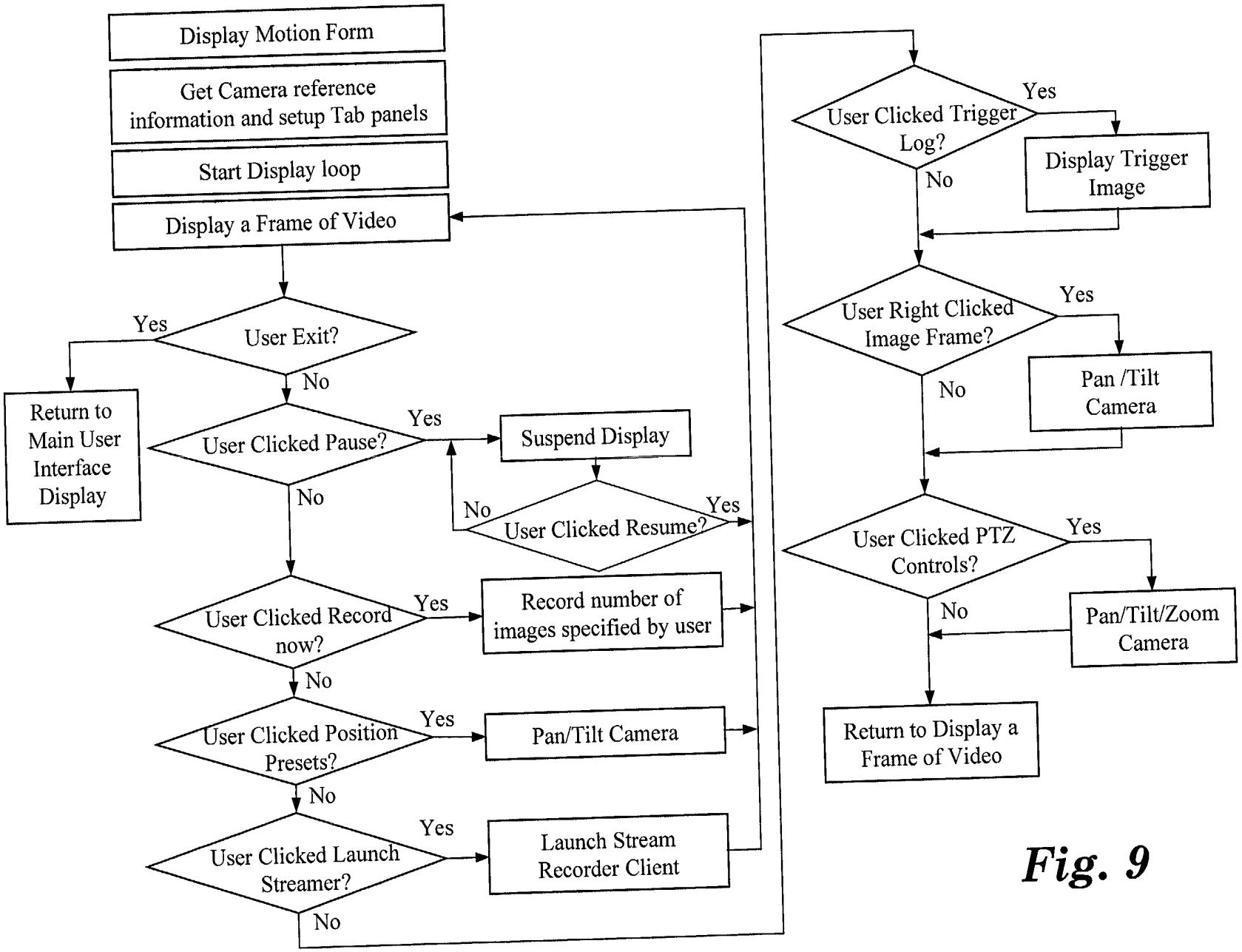
Display Motion Form
Get Camera reference information and setup Tab panels
Start Display loop
Display a Frame of Video
User Exit?
Yes
No
Return to Main User Interface Display
User Clicked Pause?
Yes
No
Suspend Display
User Clicked Resume?
Yes
No
User Clicked Record now?
Yes
No
Record number of images specified by user
User Clicked Position Presets?
Yes
No
Pan/Tilt Camera
User Clicked Launch Streamer?
Yes
No
Launch Stream Recorder Client
User Clicked Trigger Log?
Yes
No
Display Trigger Image
User Right Clicked Image Frame?
Yes
No
Pan /Tilt Camera
User Clicked PTZ Controls?
Yes
No
Pan/Tilt/Zoom Camera
Return to Display a Frame of Video

Fig. 9

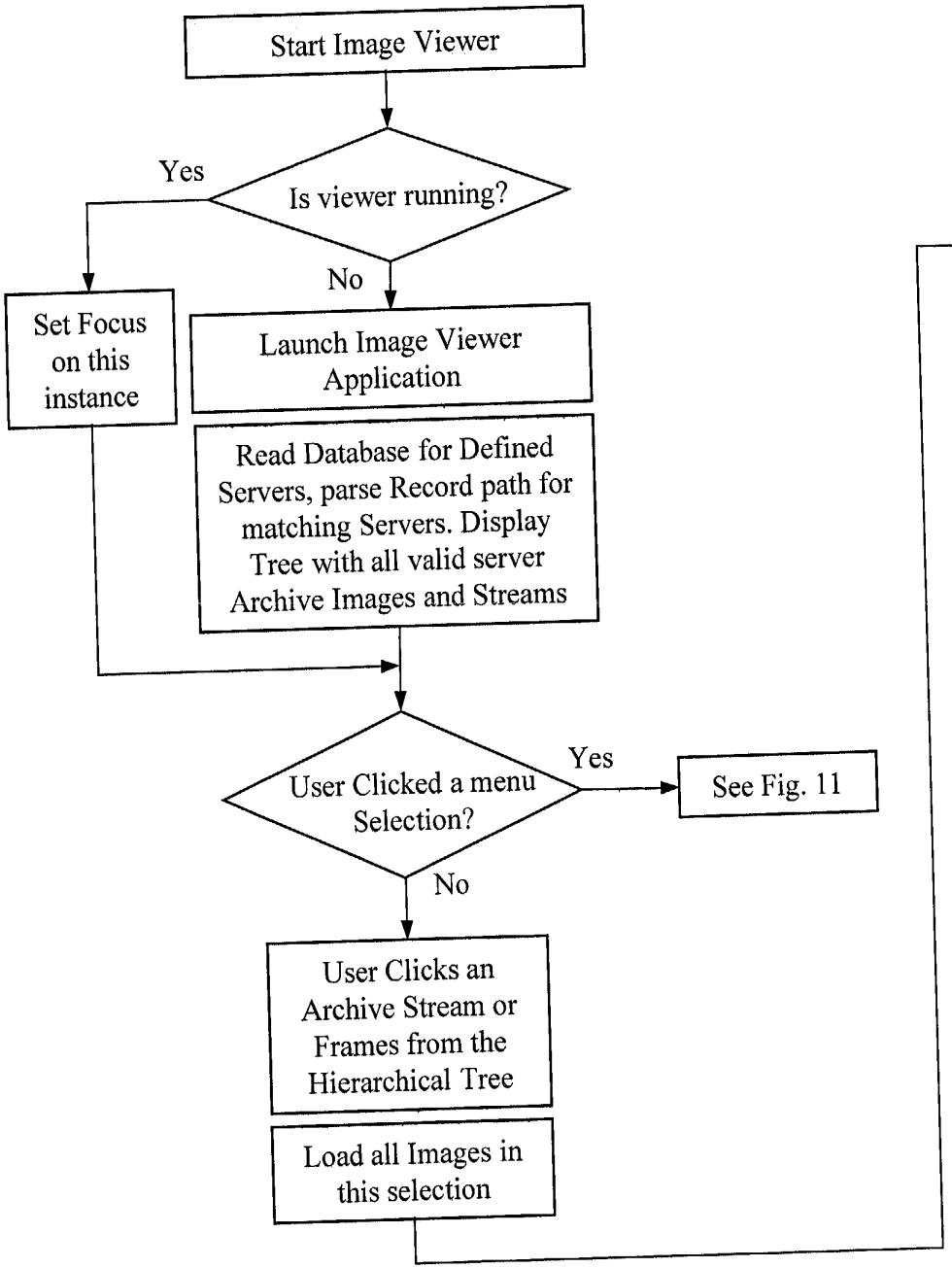
Start Image Viewer
Is viewer running?
Yes
No
Set Focus on this instance
Launch Image Viewer Application
Read Database for Defined Servers, parse Record path for matching Servers. Display Tree with all valid server Archive Images and Streams
User Clicked a menu Selection?
Yes
See Fig. 11
No
User Clicks an Archive Stream or Frames from the Hierarchical Tree
Load all Images in this selection
If archive is not receiving new image data, read the image index NDX or Create if it does not exist
Read Image metrics into a numeric array by date/time order.
Display First Frame
User can Click the buttons that emulate a VCR for Play, Pause Stop and Frame Advance/Review.

Fig. 10

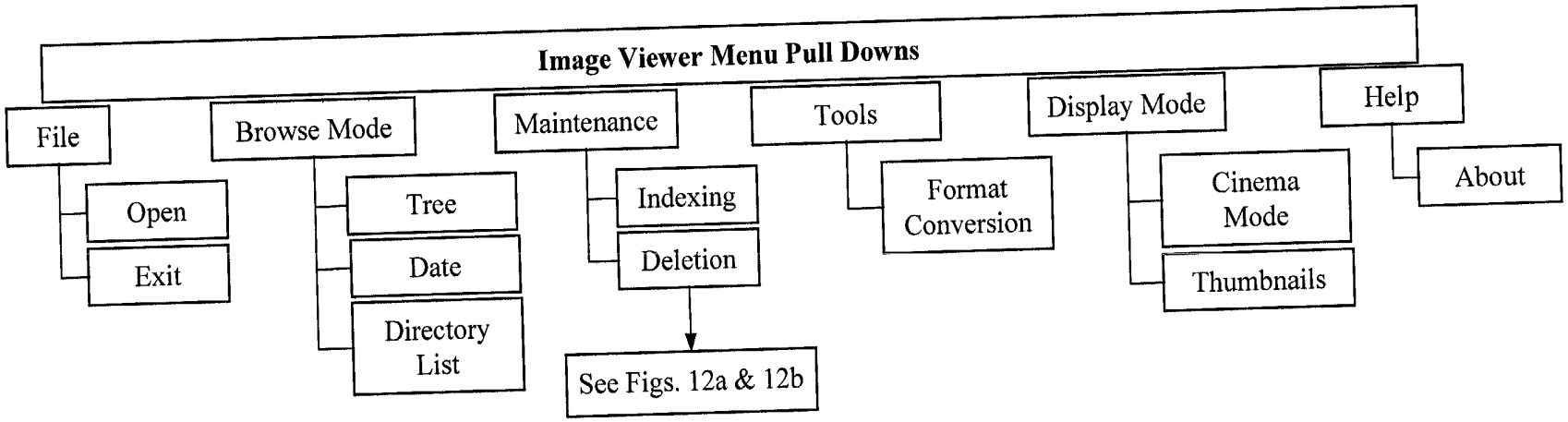
Image Viewer Menu Pull Downs
File
Open
Exit
Browse Mode
Tree
Date
Directory List
Maintenance
Indexing
Deletion
See Figs. 12a & 12b
Tools
Format Conversion
Display Mode
Cinema Mode
Thumbnails
Help
About

Fig. 11

Patent Pending

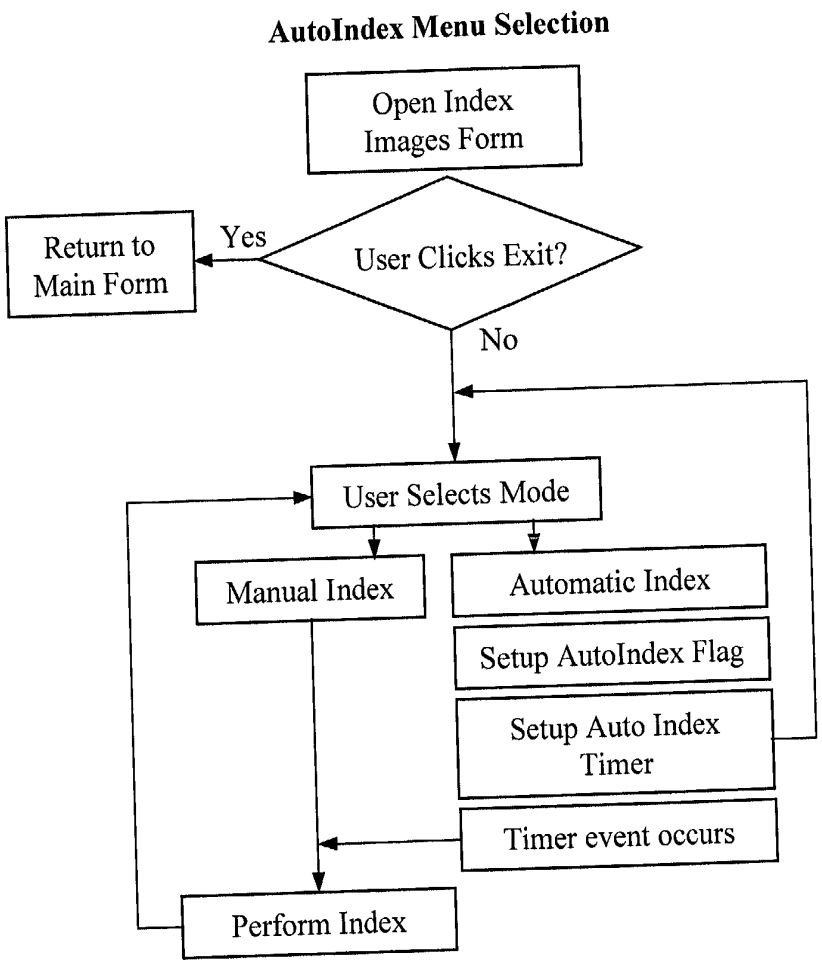

Fig. 12a

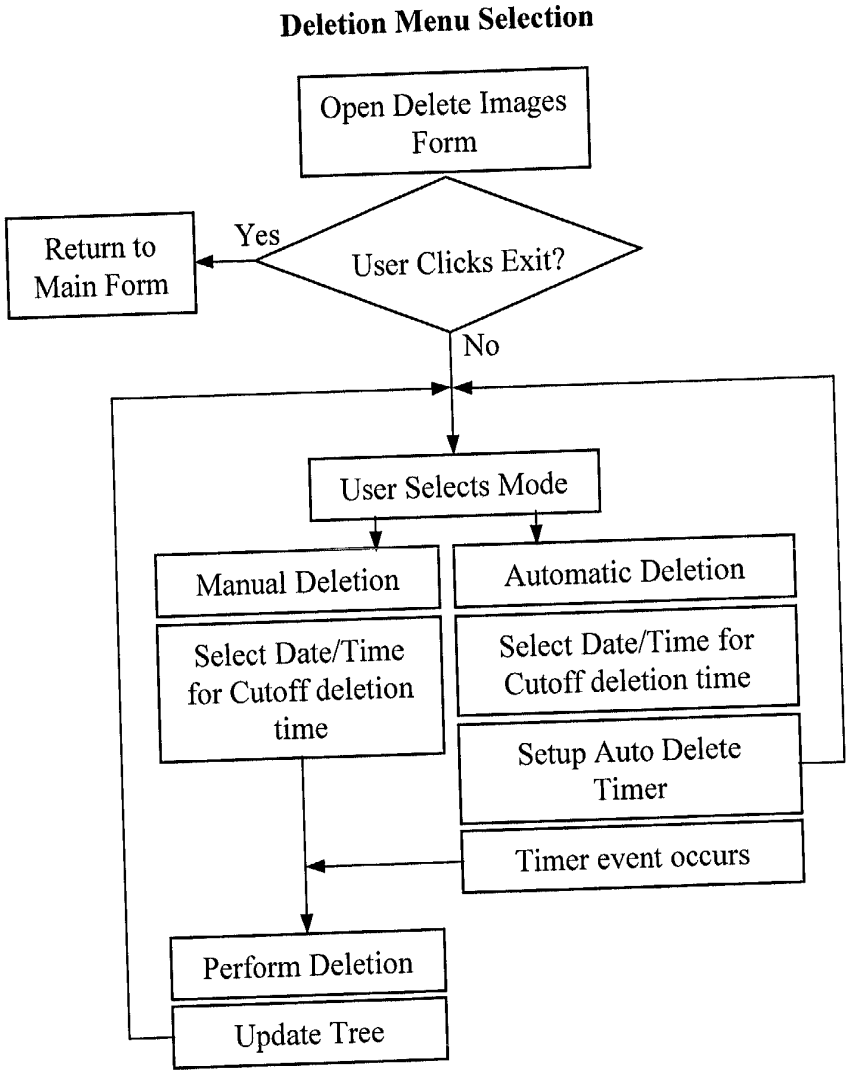

Fig. 12b

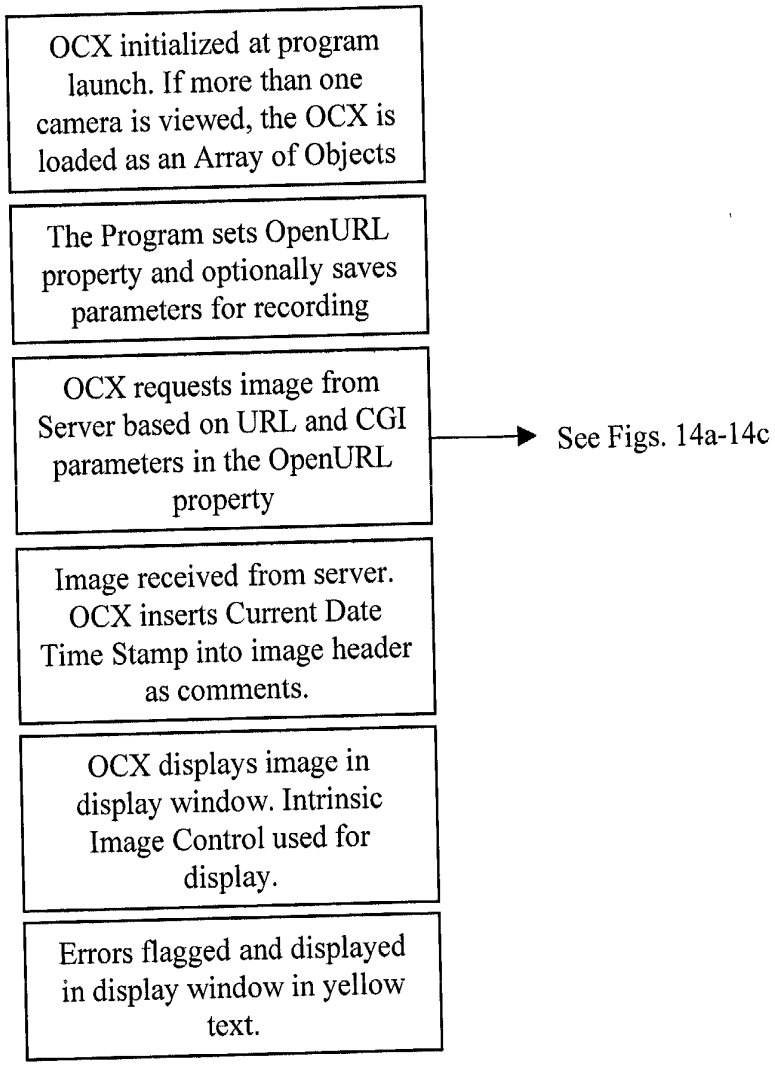
OCX initialized at program launch. If more than one camera is viewed, the OCX is loaded as an Array of Objects
The Program sets OpenURL property and optionally saves parameters for recording
OCX requests image from Server based on URL and CGI parameters in the OpenURL property
See Figs. 14a-14c
Image received from server. OCX inserts Current Date Time Stamp into image header as comments.
OCX displays image in display window. Intrinsic Image Control used for display.
Errors flagged and displayed in display window in yellow text.

Fig. 13

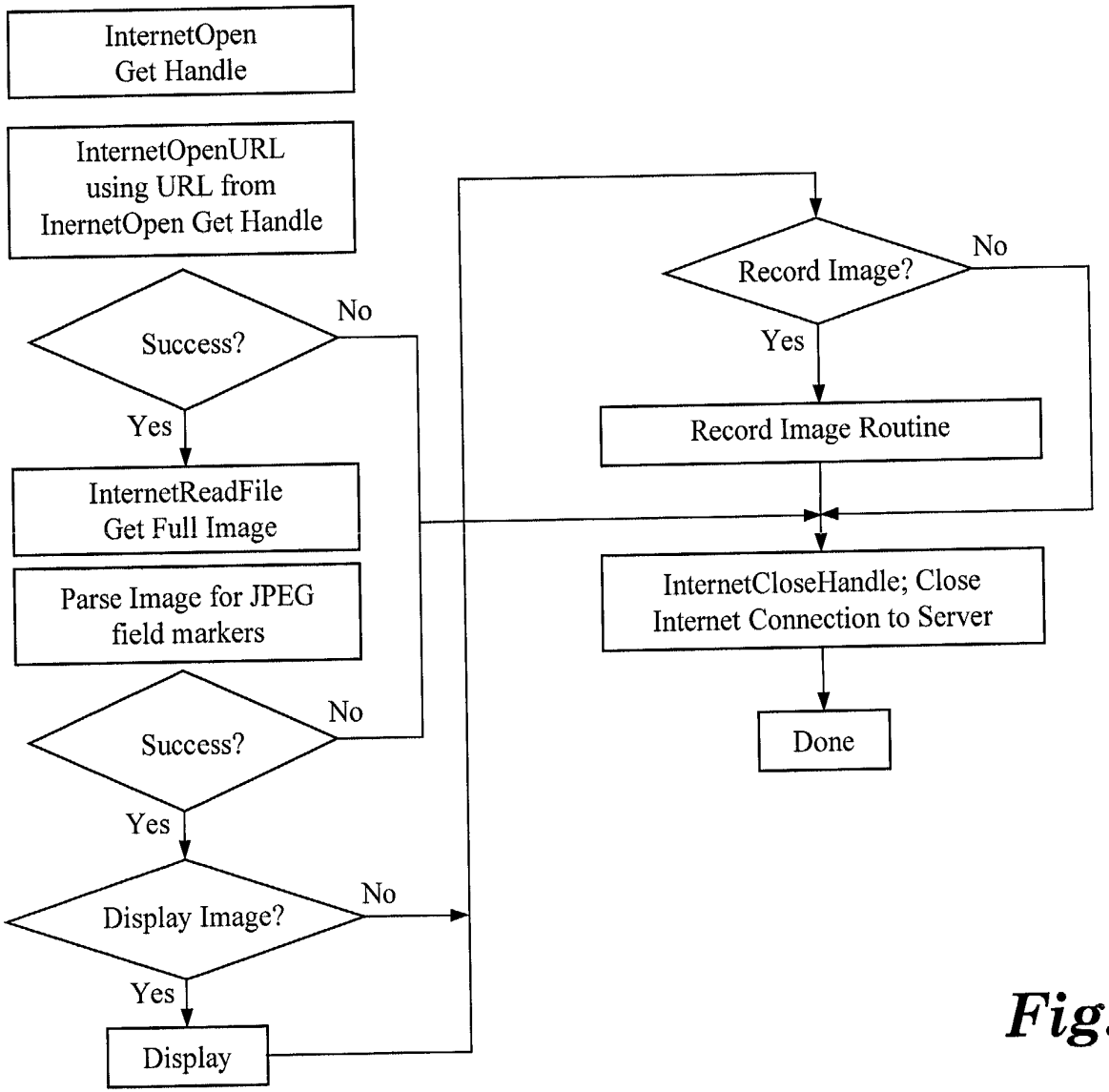
InternetOpen
Get Handle
InternetOpenURL
using URL from
InernetOpen Get Handle
Success?
No
Yes
InternetReadFile
Get Full Image
Parse Image for JPEG
field markers
Success?
No
Yes
Display Image?
No
Yes
Display
Record Image?
No
Yes
Record Image Routine
InternetCloseHandle; Close
Internet Connection to Server
Done

Fig. 14a

Patent Application

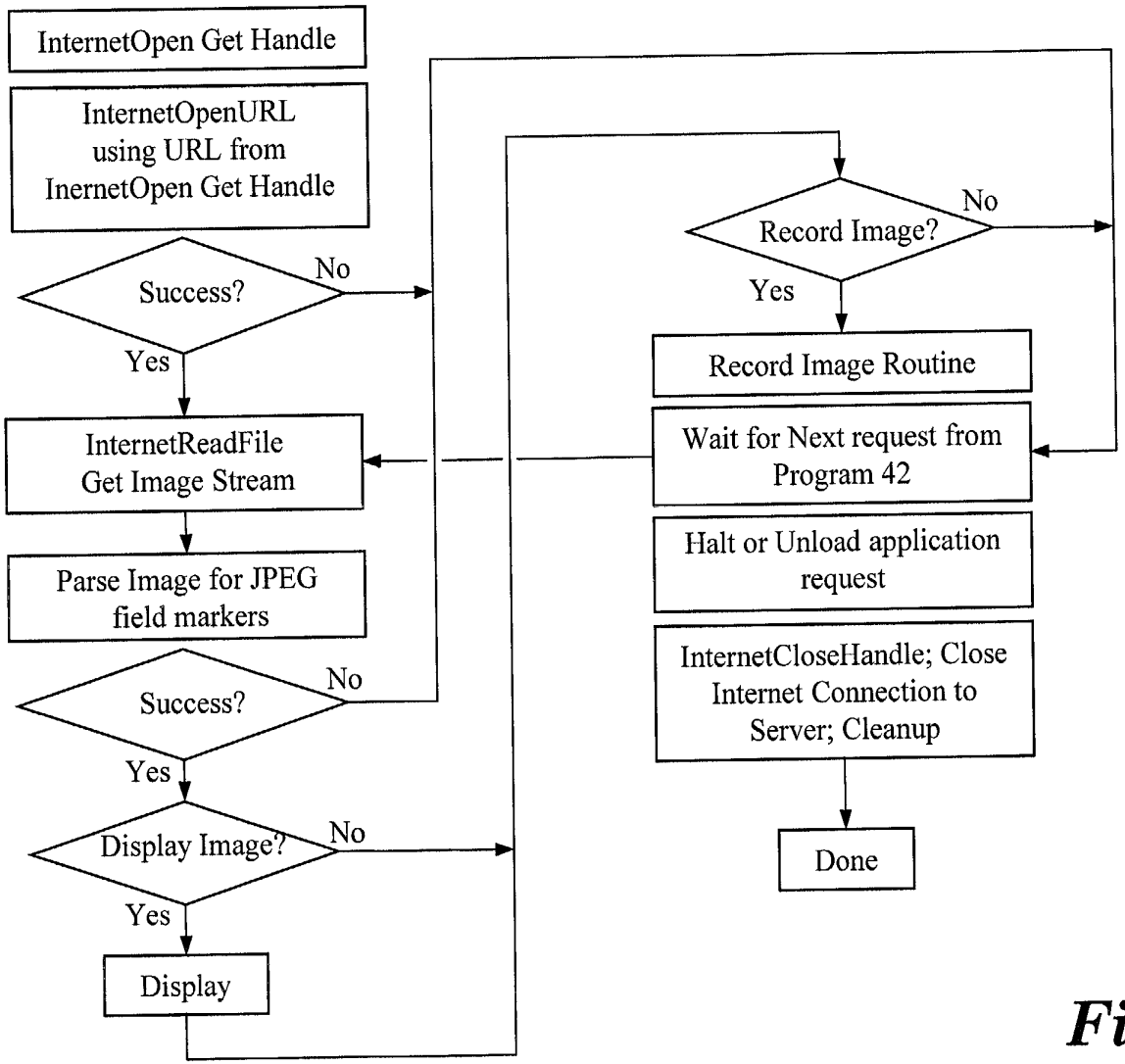

Fig. 14b

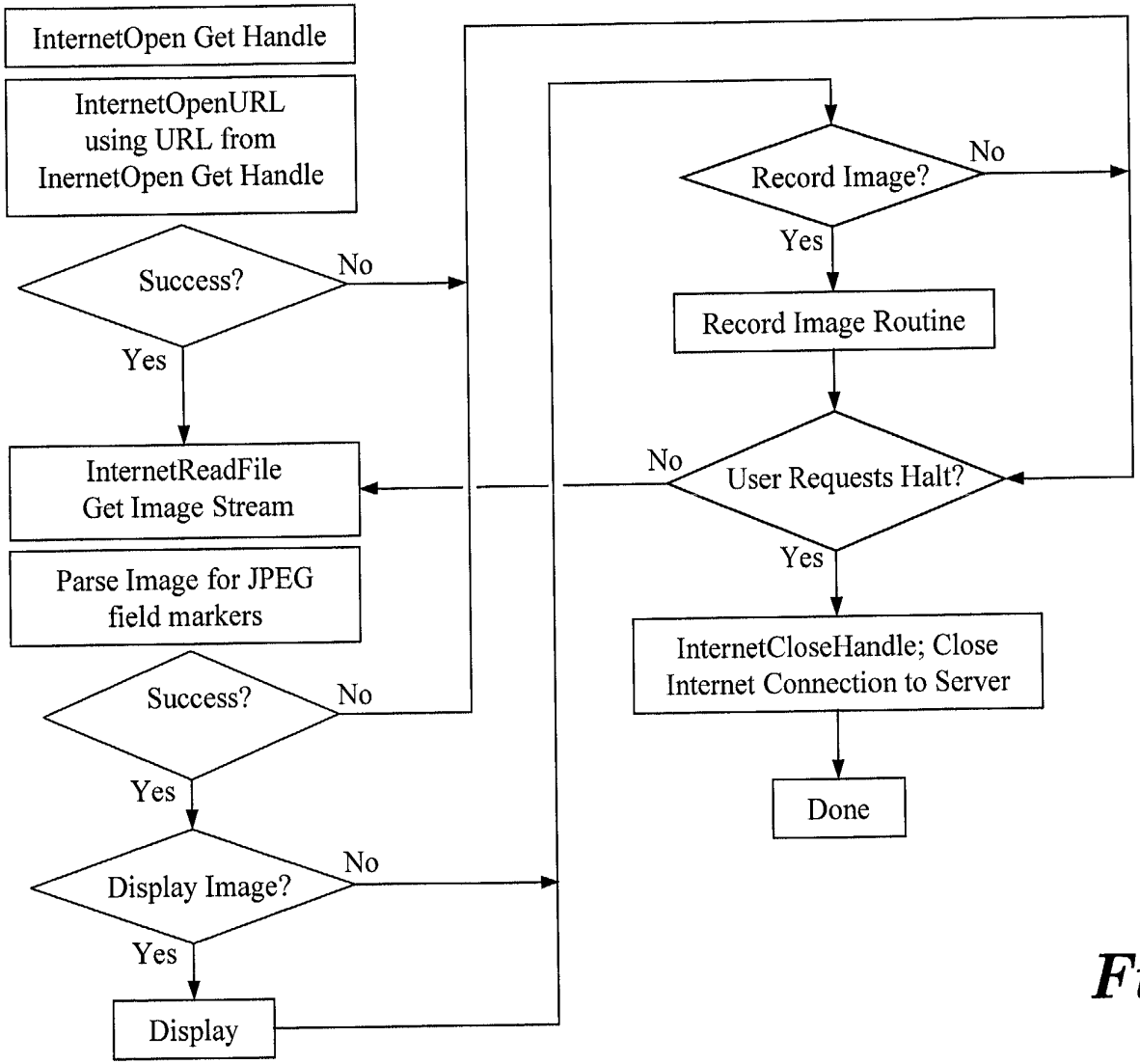
InternetOpen Get Handle
InternetOpenURL using URL from InernetOpen Get Handle
Success?
No
Yes
InternetReadFile Get Image Stream
Parse Image for JPEG field markers
Success?
No
Yes
Display Image?
No
Yes
Display
Record Image?
No
Yes
Record Image Routine
No
User Requests Halt?
Yes
InternetCloseHandle; Close Internet Connection to Server
Done

Fig. 14c

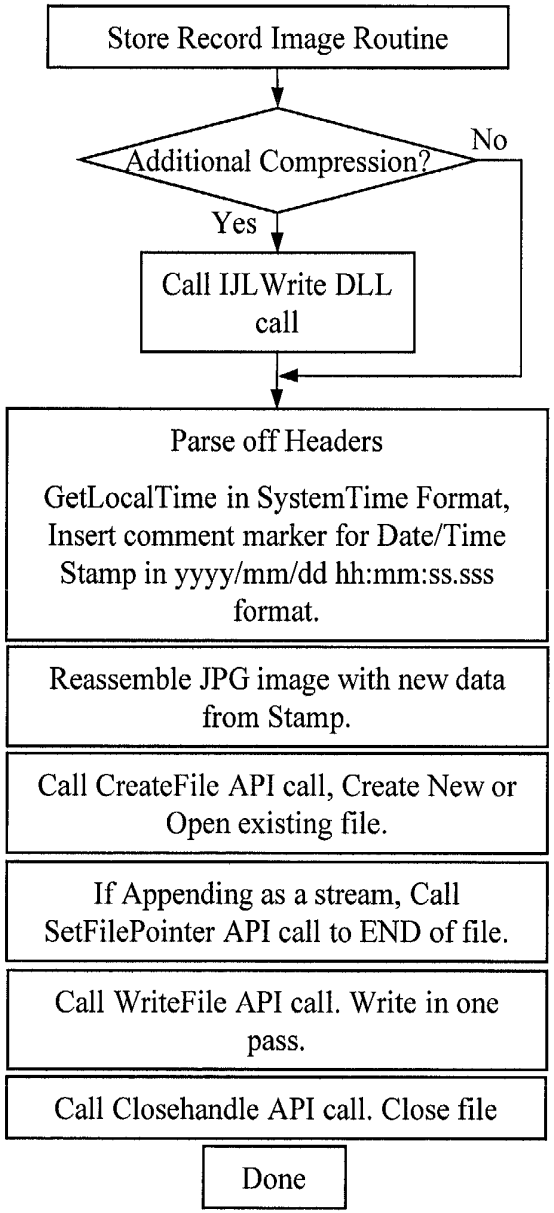
Store Record Image Routine
Additional Compression?
No
Yes
Call IJLWrite DLL call
Parse off Headers
GetLocalTime in SystemTime Format, Insert comment marker for Date/Time Stamp in yyyy/mm/dd hh:mm:ss.sss format.
Reassemble JPG image with new data from Stamp.
Call CreateFile API call, Create New or Open existing file.
If Appending as a stream, Call SetFilePointer API call to END of file.
Call WriteFile API call. Write in one pass.
Call Closehandle API call. Close file
Done

Fig. 15

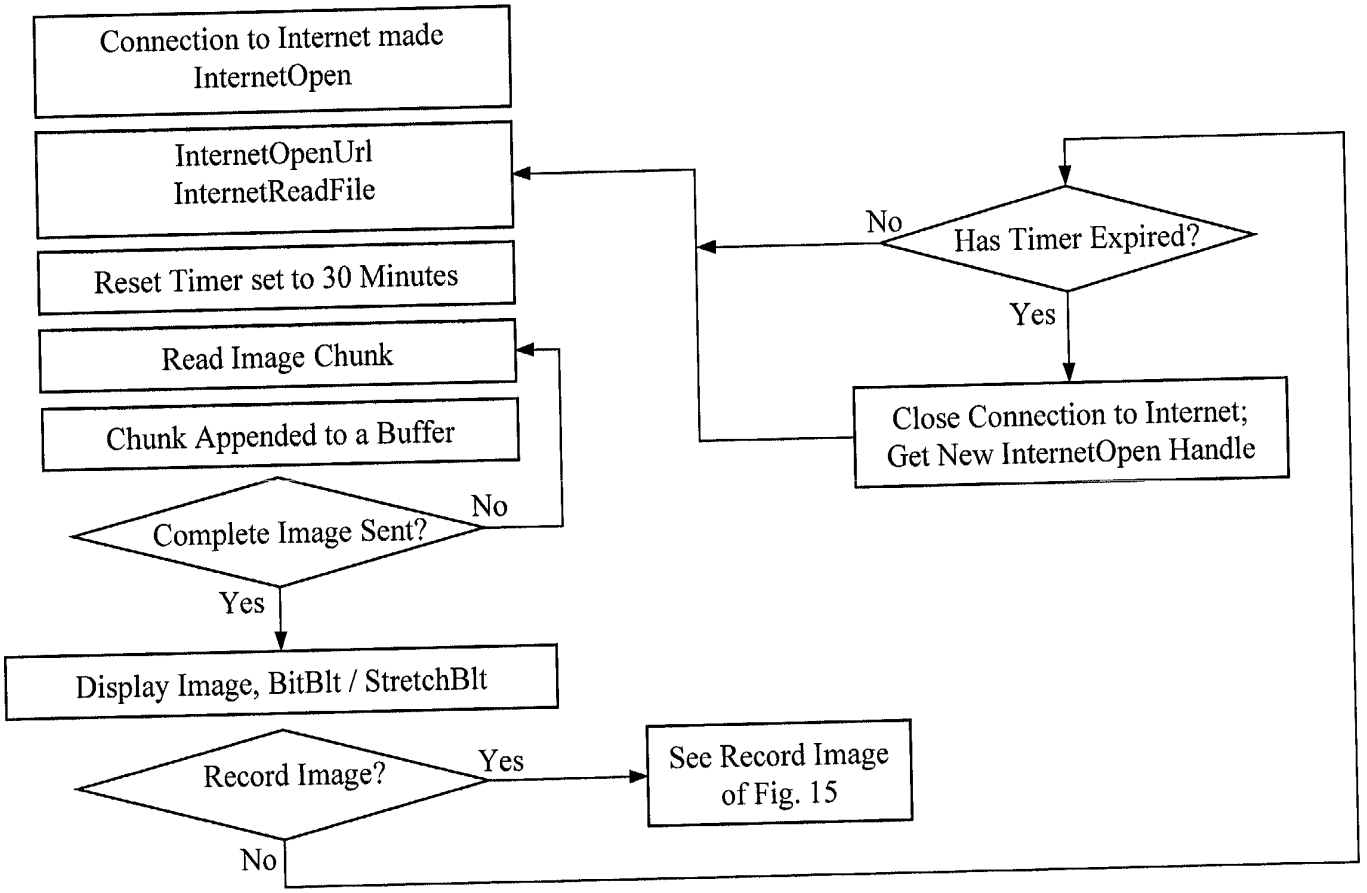
Connection to Internet made
InternetOpen
InternetOpenUrl
InternetReadFile
Reset Timer set to 30 Minutes
Read Image Chunk
Chunk Appended to a Buffer
Complete Image Sent?
No
Yes
Display Image, BitBlt / StretchBlt
Record Image?
Yes
See Record Image
of Fig. 15
No
Has Timer Expired?
No
Yes
Close Connection to Internet;
Get New InternetOpen Handle

Fig. 16

Patent Application

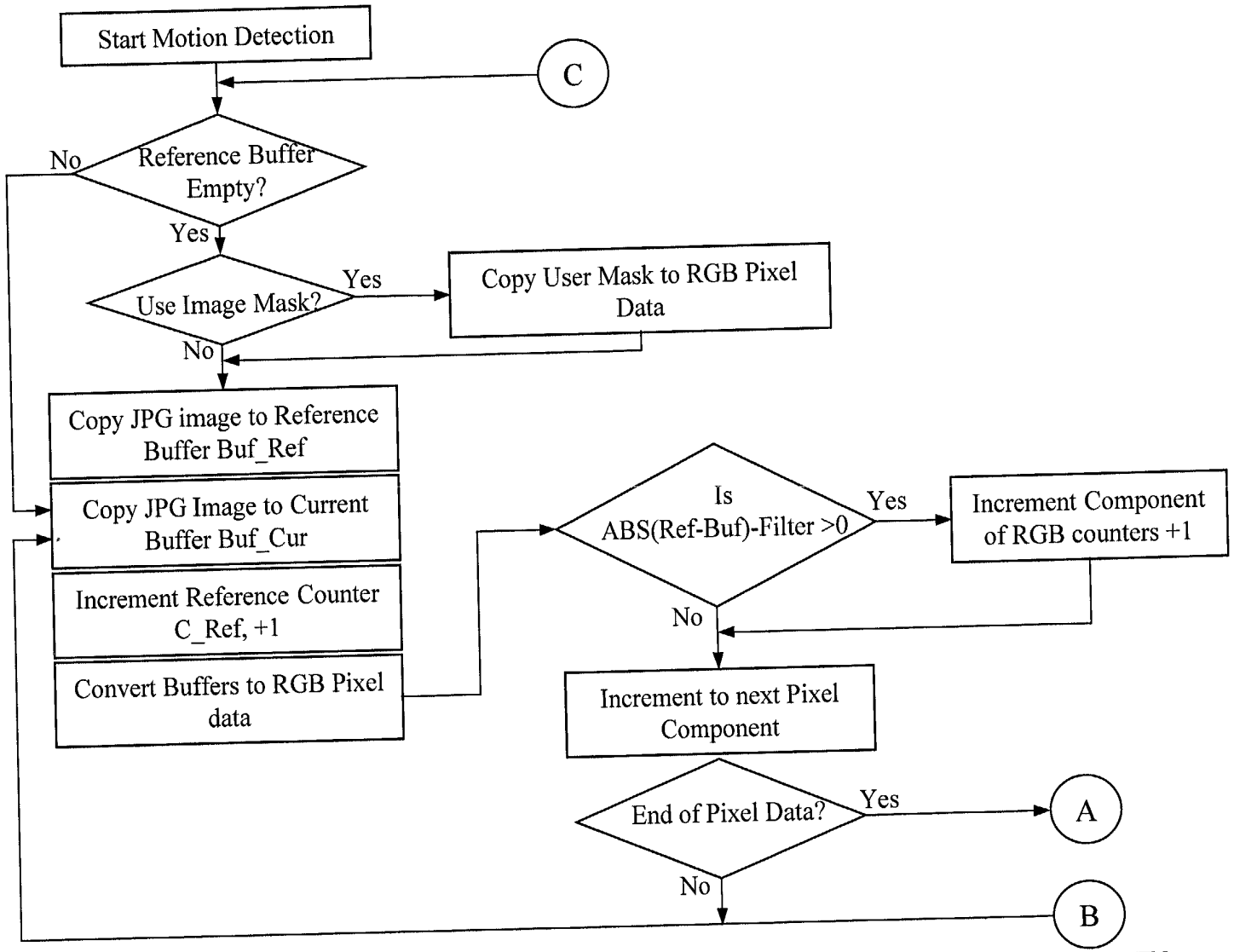

Fig. 17a

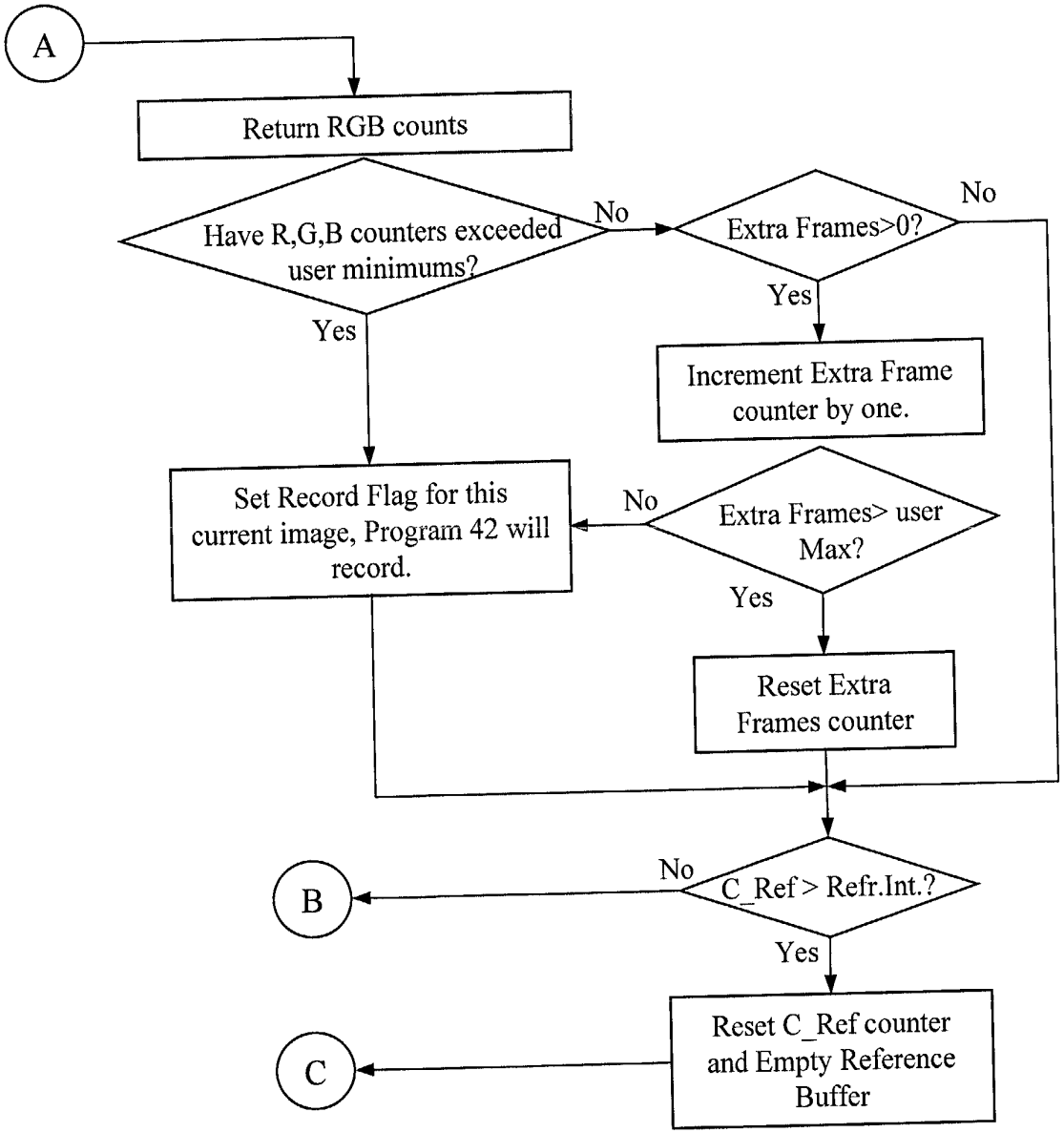
A
Return RGB counts
Have R,G,B counters exceeded user minimums?
No
Extra Frames>0?
No
Yes
Yes
Increment Extra Frame counter by one.
Set Record Flag for this current image, Program 42 will record.
No
Extra Frames> user Max?
Yes
Reset Extra Frames counter
B
No
C_Ref > Refr.Int.?
Yes
C
Reset C_Ref counter and Empty Reference Buffer

Fig. 17b